

24 Jan 94

**APPENDIX E**  
***MECHANICAL ESTIMATES***

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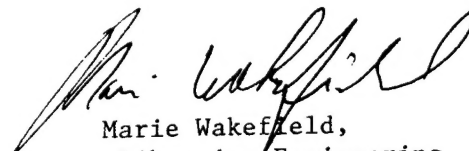


DEPARTMENT OF THE ARMY  
CONSTRUCTION ENGINEERING RESEARCH LABORATORIES, CORPS OF ENGINEERS  
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Marie Wakefield,  
Librarian Engineering

***Building 005***  
***(Typical for 006, 017, 018, 019,***  
***020, 021, 026, and 029)***

***Mechanical Estimate***

ETEC QUALITY INSPECTED 2

19971017 183

**CARLISLE BARRACKS ENERGY STUDY**  
**Individual Building Material Take Off Worksheet**

Building No.	5
--------------	---

Building Name: GARRISON AVENUE

Date Prepared: JAN. 24, 1994

Estimator: DICK CONRAD

Sheet of

BID ITEM	
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[illegible]

Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB0055: CB BLDG 005, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 13:56:08

TITLE PAGE 1

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CB BLDG 005, ECO #5  
ESOS Carlisle Barracks  
Contract No. DACA65-93-C-0018  
Building 005, Pipe & Duct Insul  
Carlisle Barracks, PA

Designed By: Benatec Associates  
Estimated By: Benatec Associates

Prepared By: Benatec Associates

Date: 01/24/94

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Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB0055: CB BLDG 005, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 13:56:08

SETTINGS PAGE 1

\*\* CONTRACTOR SETTINGS \*\*

-----  
AMOUNT PCT PCT S RISK DIFF SIZE PERIOD INVEST ASSIST SUBCON  
-----

01 Heating Contractor

OVERHEAD	P	5.00								
HOME OFC	P	10.00								
PROFIT	C	8.65		0.052	0.075	0.119	0.052	0.075	0.120	0.118
BOND	P	2.00								

Mon 24 Jan 1994

U.S. Army Corps of Engineers

TIME 13:56:08

PROJECT CB0055: CB BLDG 005, ECO #5 - ESOS Carlisle Barracks

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No Backup Reports...

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Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB0055: CB BLDG 005, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION  
\*\* PROJECT OWNER SUMMARY - LEVEL 1 \*\*

TIME 13:56:08

SUMMARY PAGE 1

	QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	SIOH	TOTAL COST	UNIT COST
01 Contract	1.00 EA	9,484	0	474	0	9,959	9958.67
CB BLDG 005, ECO #5	1.00 EA	9,484	0	474	0	9,959	9958.67



Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB0055: CB BLDG 005, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION  
\*\* PROJECT DIRECT SUMMARY - LEVEL 1 \*\*

TIME 13:56:08

SUMMARY PAGE 2

	QUANTITY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
01 Contract	1.00 EA	84	2,659	85	4,665	0	7,409	7409.35
CB BLDG 005, ECO #5 OVERHEAD	1.00 EA	84	2,659	85	4,665	0	7,409 370	7409.35
SUBTOTAL HOME OFC							7,780 778	
SUBTOTAL PROFIT							8,558 741	
SUBTOTAL BOND							9,298 186	
TOTAL INCL INDIRECTS CONTNGENCY							9,484 474	
TOTAL INCL OWNER COSTS							9,959	

Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB0055: CB BLDG 005, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION  
\*\* CONTRACTOR INDIRECT SUMMARY \*\*

TIME 13:56:08

SUMMARY PAGE 3

	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
HC Heating Contractor	7,409	370	778	741	186	9,484	9484.45

Mon 24 Jan 1994

U.S. Army Corps of Engineers

TIME 13:56:08

PROJECT CB0055: CB BLDG 005, ECO #5 - ESOS Carlisle Barracks

DETAILED ESTIMATE

INTERIM SUBMISSION

DETAIL PAGE 1

01. Contract

		QUANTY	UOM	CREW ID	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST
Contract										
Demo Asb f/Pipe, < 14" D, Min Thk (36cm)	600.00	LF	ULABB		0.01 8	0.38 226	0.00 1	0.24 146	0.00 0	0.62 374
Asb Abatement Notification Fees	1.00	JOB	N/A		0.00 0	0.00 0	0.00 0	1060.00 1,060	0.00 0	1060.00 1,060
Asb Decon of Trucks & Equipment Mobilization Fees	1.00	JOB	N/A		0.00 0	0.00 0	0.00 0	1590.00 1,590	0.00 0	1590.00 1,590
Isolate Asb Work Area Floors Floor Area x 2 Layers 6 Mil Poly	2234.00	SF	AASBF		0.01 11	0.16 359	0.02 34	0.27 592	0.00 0	0.44 985
Asb Air Monitor, 4 - 6 Hours/Day Bulk Sampling Tech Time Only	2.00	DAY	N/A		0.00 0	0.00 0	0.00 0	212.00 424	0.00 0	212.00 424
Initial Asb Abatement Clean-Up Isolated Work Area	2234.00	SF	AASBE		0.01 24	0.34 756	0.02 34	0.01 24	0.00 0	0.36 814
3/4"D Pipe, 1" Thk Fib Pipe Cover /Fire Retardant Jackets	275.00	LF	AASBC		0.06 18	2.06 568	0.02 7	0.90 248	0.00 0	2.99 822
3/4"D Pipe, 1-1/2" Thk Fib Pipe Cover w/ Fire Retardant Jackets	140.00	LF	AASBC		0.05 8	1.76 246	0.02 3	1.35 188	0.00 0	3.13 438
1"D Pipe, 1-1/2" Thk Fib Pipe Cover w/ Fire Retardant Jackets	130.00	LF	AASBC		0.06 7	1.84 239	0.02 3	1.42 185	0.00 0	3.28 426
2"D Pipe, 1-1/2" Thk Fib Pipe Cover w/ Fire Retardant Jackets	130.00	LF	AASBC		0.06 8	2.04 265	0.02 3	1.60 208	0.00 0	3.66 476
Contract					84	2,659	85	4,665	0	7,409
CB BLDG 005, ECO #5					84	2,659	85	4,665	0	7,409

Mon 24 Jan 1994

U.S. Army Corps of Engineers

TIME 13:56:08

PROJECT CB0055: CB BLDG 005, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION

ERROR REPORT

ERROR PAGE 1

No errors detected...

\* \* \* END OF ERROR REPORT \* \* \*

*Building 023*  
*Mechanical Estimate*

933702

# CARLISLE BARRACKS ENERGY STUDY

## Individual Building Material Take Off Worksheet

Building No.	23
--------------	----

Building Name: Thorne Gym

Date Prepared: 1/26/94

Estimator: D. Burleigh

Sheet 1 of 1

BID ITEM	Prevent Air Strat.
----------	--------------------

[illegible]

Tue 01 Feb 1994

U.S. Army Corps of Engineers  
PROJECT CB023A: CB BLDG 023, ECO #A - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 15:22:45

TITLE PAGE 1

---

CB BLDG 023, ECO #A  
ESOS Carlisle Barracks  
Contract No. DACA65-93-C-0018  
Building 023, Prevent Air Strat.  
Carlisle Barracks, PA

Designed By: Benatec Associates  
Estimated By: Benatec Associates

Prepared By: Benatec Associates

Date: 02/01/94

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U.S. Army Corps of Engineers  
PROJECT CB023A: CB BLDG 023, ECO #A - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 15:22:45

SETTINGS PAGE 1

\*\* CONTRACTOR SETTINGS \*\*

		AMOUNT	PCT	PCT S	RISK	DIFF	SIZE	PERIOD	INVEST	ASSIST	SUBCON
01 HEATING CONTRACTOR											
OVERHEAD	S		5.00	5.00							
HOME OFC	P		10.00								
PROFIT	S		8.66	5.00							
BOND	P		2.00								
02 ELECTRICAL CONTRACTOR											
OVERHEAD	P		5.00								
HOME OFC	P		10.00								
PROFIT	C		8.65		0.052	0.075	0.119	0.052	0.075	0.120	0.118
BOND	P		2.00								



Tue 01 Feb 1994

U.S. Army Corps of Engineers  
PROJECT CB023A: CB BLDG 023, ECO #A - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 15:22:45

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Tue 01 Feb 1994

U.S. Army Corps of Engineers  
PROJECT CB023A: CB BLDG 023, ECO #A - ESOS Carlisle Barracks  
INTERIM SUBMISSION  
\*\* PROJECT OWNER SUMMARY - LEVEL 1 \*\*

TIME 15:22:45

SUMMARY PAGE 1

	QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	SIOH	TOTAL COST	UNIT COST
1 CONTRACT	1.00 EA	5,173	0	259	0	5,431	5431.25
CB BLDG 023, ECO #A	1.00 EA	5,173	0	259	0	5,431	5431.25

[illegible]

Tue 01 Feb 1994

U.S. Army Corps of Engineers  
PROJECT CB023A: CB BLDG 023, ECO #A - ESOS Carlisle Barracks  
INTERIM SUBMISSION  
\*\* CONTRACTOR INDIRECT SUMMARY \*\*

TIME 15:22:45

SUMMARY PAGE 3

	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
HC HEATING CONTRACTOR	3,086	154	324	309	77	3,951	3950.73
EC ELECTRICAL CONTRACTOR	955	48	100	95	24	1,222	1221.89

Tue 01 Feb 1994

U.S. Army Corps of Engineers

TIME 15:22:45

PROJECT CB023A: CB BLDG 023, ECO #A - ESOS Carlisle Barracks

DETAILED ESTIMATE

INTERIM SUBMISSION

DETAIL PAGE 1

## 1. CONTRACT

QUANTY UOM CREW ID			MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST
CONTRACT								
Indus Grde Ceiling Fan,21015 CFM			20.00	658.88	7.67	105.00	0.00	771.55
Reversible,120V 60Hz,HD 4-Blade	4.00 EA	MSHMD	80	2,636	31	420	0	3,086
3/4" EMT w/Coupling			0.05	1.93	0.01	0.32	0.00	2.26
Mtd Exposed on Flat Wall,10' Hgt	220.00 LF	EELEF	12	425	2	70	0	497
#10 AWG Cable-Type THW			8.73	315.49	1.17	62.53	0.00	379.19
600V Cu,Sgl Sol,P1 in Cnd,12'Hgt	0.66 MLF	EELEF	6	208	1	41	0	250
1 Pole, 240 V, 15-60a Breaker			1.54	60.88	0.20	9.77	0.00	70.84
NEMA 1,Standard AIC,Crk Breakers	1.00 EA	EELEB	2	61	0	10	0	71
SPST, EP,120V,20A,Exp			0.79	31.40	0.10	105.40	0.00	136.91
Specialty Devices	1.00 EA	EELEB	1	31	0	105	0	137
CONTRACT			100	3,361	33	647	0	4,041
B BLDG 023, ECO #A			100	3,361	33	647	0	4,041

Tue 01 Feb 1994

U.S. Army Corps of Engineers

TIME 15:22:45

PROJECT CB023A: CB BLDG 023, ECO #A - ESOS Carlisle Barracks  
INTERIM SUBMISSION

ERROR REPORT

ERROR PAGE 1

No errors detected...

\*\*\* END OF ERROR REPORT \*\*\*

***Building 026 (Typical for 29)***

***Mechanical Estimate***

933702

# CARLISLE BARRACKS ENERGY STUDY

## Individual Building Material Take Off Worksheet

Building No.	26
--------------	----

Building Name: GARRISON AVENUE

Date Prepared: JAN. 21, 1994

Estimator: DICK CONRAD

Sheet of

BID ITEM	
----------	--

[illegible]



Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB0265: CB BLDG 026, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 14:13:31

TITLE PAGE 1

CB BLDG 026, ECO #5  
ESOS Carlisle Barracks  
Contract No. DACA65-93-C-0018  
Building 026, Pipe & Duct Insul  
Carlisle Barracks, PA

Designed By: Benatec Associates  
Estimated By: Benatec Associates

Prepared By: Benatec Associates

Date: 01/24/94

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U.S. Army Corps of Engineers  
PROJECT CB0265: CB BLDG 026, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 14:13:31

SETTINGS PAGE 1

\*\* CONTRACTOR SETTINGS \*\*

-----  
AMOUNT PCT PCT S RISK DIFF SIZE PERIOD INVEST ASSIST SUBCON  
-----

01 Heating Contractor

OVERHEAD	P	5.00								
HOME OFC	P	10.00								
PROFIT	C	8.65		0.052	0.075	0.119	0.052	0.075	0.120	0.118
BOND	P	2.00								

Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB0265: CB BLDG 026, ECO #5 - ESOS Carlisle Barracks  
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No Backup Reports...

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Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB0265: CB BLDG 026, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION  
\*\* PROJECT OWNER SUMMARY - LEVEL 1 \*\*

TIME 14:13:31

SUMMARY PAGE 1

	QUANTITY	UOM	CONTRACT	ESCALATN	CONTINGN	SIOH	TOTAL COST	UNIT COST
01 Contract	1.00	EA	9,484	0	474	0	9,958	9958.46
CB BLDG 026, ECO #5	1.00	EA	9,484	0	474	0	9,958	9958.46

Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB0265: CB BLDG 026, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION  
\*\* PROJECT DIRECT SUMMARY - LEVEL 1 \*\*

TIME 14:13:31

SUMMARY PAGE 2

	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
01 Contract	1.00	EA	84	2,659	85	4,665	0	7,409	7409.19
CB BLDG 026, ECO #5 OVERHEAD	1.00	EA	84	2,659	85	4,665	0	7,409 370	7409.19
SUBTOTAL								7,780	
HOME OFC								778	
SUBTOTAL								8,558	
PROFIT								741	
SUBTOTAL								9,298	
BOND								186	
TOTAL INCL INDIRECTS								9,484	
CONTINGENCY								474	
TOTAL INCL OWNER COSTS								9,958	

Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB0265: CB BLDG 026, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION  
\*\* CONTRACTOR INDIRECT SUMMARY \*\*

TIME 14:13:31

SUMMARY PAGE 3

	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
HC Heating Contractor	7,409	370	778	741	186	9,484	9484.24

Mon 24 Jan 1994

U.S. Army Corps of Engineers

TIME 14:13:31

PROJECT CB0265: CB BLDG 026, ECO #5 - ESOS Carlisle Barracks

DETAILED ESTIMATE

INTERIM SUBMISSION

DETAIL PAGE 1

01. Contract

		QUANTY	UOM	CREW ID	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST
Contract										
Demo Asb f/Pipe, < 14" D, Min Thk (36cm)	600.00	LF	ULABB		0.01 8	0.38 226	0.00 1	0.24 146	0.00 0	0.62 374
Asb Abatement Notification Fees	1.00	JOB	N/A		0.00 0	0.00 0	0.00 0	1060.00 1,060	0.00 0	1060.00 1,060
Asb Decon of Trucks & Equipment Mobilization Fees	1.00	JOB	N/A		0.00 0	0.00 0	0.00 0	1590.00 1,590	0.00 0	1590.00 1,590
Isolate Asb Work Area Floors Floor Area x 2 Layers 6 Mil Poly	2234.00	SF	AASBF		0.01 11	0.16 359	0.02 34	0.27 592	0.00 0	0.44 985
Asb Air Monitor, 4 - 6 Hours/Day Bulk Sampling Tech Time Only	2.00	DAY	N/A		0.00 0	0.00 0	0.00 0	212.00 424	0.00 0	212.00 424
Initial Asb Abatement Clean-Up Isolated Work Area	2234.00	SF	AASBE		0.01 24	0.34 756	0.02 34	0.01 24	0.00 0	0.36 814
3/4"D Pipe, 1" Thk Fib Pipe Cover Fire Retardant Jackets	275.00	LF	AASBC		0.06 18	2.06 568	0.02 7	0.90 248	0.00 0	2.99 822
3/4"D Pipe, 1-1/2' Thk Fib Pipe Cover w/ Fire Retardant Jackets	140.00	LF	AASBC		0.05 8	1.76 246	0.02 3	1.35 188	0.00 0	3.13 438
1"D Pipe, 1-1/2" Thk Fib Pipe Cover w/ Fire Retardant Jackets	130.00	LF	AASBC		0.06 7	1.84 239	0.02 3	1.42 185	0.00 0	3.28 426
2"D Pipe, 1-1/2" Thk Fib Pipe Cover w/ Fire Retardant Jackets	130.00	LF	AASBC		0.06 8	2.04 265	0.02 3	1.60 208	0.00 0	3.66 476
Contract					84	2,659	85	4,665	0	7,409
CB BLDG 026, ECO #5					84	2,659	85	4,665	0	7,409

Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB0265: CB BLDG 026, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 14:13:31

ERROR REPORT

ERROR PAGE 1

No errors detected...

\* \* \* END OF ERROR REPORT \* \* \*



*Building 028*

*Mechanical Estimate*

933702

## CARLISLE BARRACKS ENERGY STUDY

### Individual Building Material Take Off Worksheet

Building No. 28

Building Name: GARRISON AVE

Date Prepared: JAN. 24 1994

Estimator: DICK CONRAD
------------------------

Sheet of

BID ITEM	
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[illegible]

Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB0285: CB BLDG 028, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 14:24:21

TITLE PAGE 1

---

CB BLDG 028, ECO #5  
ESOS Carlisle Barracks  
Contract No. DACA65-93-C-0018  
Building 028, Pipe & Duct Insul  
Carlisle Barracks, PA

Designed By: Benatec Associates  
Estimated By: Benatec Associates

Prepared By: Benatec Associates

Date: 01/24/94

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U.S. Army Corps of Engineers  
PROJECT CB0285: CB BLDG 028, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 14:24:21

SETTINGS PAGE 1

\*\* CONTRACTOR SETTINGS \*\*

-----  
AMOUNT PCT PCT S RISK DIFF SIZE PERIOD INVEST ASSIST SUBCON  
-----

01 Heating Contractor

OVERHEAD	P	5.00								
HOME OFC	P	10.00								
PROFIT	C	8.65		0.052	0.075	0.119	0.052	0.075	0.120	0.118
BOND	P	2.00								

Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB0285: CB BLDG 028, ECO #5 - ESOS Carlisle Barracks  
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No Backup Reports...

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U.S. Army Corps of Engineers  
PROJECT CB0285: CB BLDG 028, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 14:24:21

SUMMARY PAGE 1

\*\* PROJECT OWNER SUMMARY - LEVEL 1 \*\*

	QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	SIOH	TOTAL COST	UNIT COST
01 Contract	1.00 EA	6,757	0	338	0	7,095	7095.29
CB BLDG 028, ECO #5	1.00 EA	6,757	0	338	0	7,095	7095.29

Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB0285: CB BLDG 028, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION  
\*\* PROJECT DIRECT SUMMARY - LEVEL 1 \*\*

TIME 14:24:21

SUMMARY PAGE 2

	QUANTITY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
01 Contract	1.00 EA	43	1,355	43	3,881	0	5,279	5278.97
CB BLDG 028, ECO #5 OVERHEAD	1.00 EA	43	1,355	43	3,881	0	5,279 264	5278.97
SUBTOTAL HOME OFC							5,543 554	
SUBTOTAL PROFIT							6,097 528	
SUBTOTAL BOND							6,625 132	
TOTAL INCL INDIRECTS CONTNGENCY							6,757 338	
TOTAL INCL OWNER COSTS							7,095	

Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB0285: CB BLDG 028, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION  
\*\* CONTRACTOR INDIRECT SUMMARY \*\*

TIME 14:24:21

SUMMARY PAGE 3

	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
HC Heating Contractor	5,279	264	554	528	132	6,757	6757.42



Mon 24 Jan 1994

U.S. Army Corps of Engineers

TIME 14:24:21

PROJECT CB0285: CB BLDG 028, ECO #5 - ESOS Carlisle Barracks

DETAILED ESTIMATE

INTERIM SUBMISSION

DETAIL PAGE 1

01. Contract

	QUANTY	UOM	CREW ID	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST
Contract									
Demo Asb f/Pipe, < 14" D, Min Thk (36cm)	300.00	LF	ULABB	0.01 4	0.38 113	0.00 1	0.24 73	0.00 0	0.62 187
Asb Abatement Notification Fees	1.00	JOB	N/A	0.00 0	0.00 0	0.00 0	1060.00 1,060	0.00 0	1060.00 1,060
Asb Decon of Trucks & Equipment Mobilization Fees	1.00	JOB	N/A	0.00 0	0.00 0	0.00 0	1590.00 1,590	0.00 0	1590.00 1,590
Isolate Asb Work Area Floors Floor Area x 2 Layers 6 Mil Poly	1117.00	SF	AASBF	0.01 6	0.16 179	0.02 17	0.27 296	0.00 0	0.44 493
Asb Air Monitor, 4 - 6 Hours/Day Bulk Sampling Tech Time Only	2.00	DAY	N/A	0.00 0	0.00 0	0.00 0	212.00 424	0.00 0	212.00 424
Initial Asb Abatement Clean-Up Isolated Work Area	1117.00	SF	AASBE	0.01 12	0.34 378	0.02 17	0.01 12	0.00 0	0.36 407
3/4"D Pipe, 1" Thk Fib Pipe Cover Fire Retardant Jackets	150.00	LF	AASBC	0.06 10	2.06 310	0.02 4	0.90 135	0.00 0	2.99 448
3/4"D Pipe, 1-1/2" Thk Fib Pipe Cover w/ Fire Retardant Jackets	70.00	LF	AASBC	0.05 4	1.76 123	0.02 1	1.35 94	0.00 0	3.13 219
1"D Pipe, 1-1/2" Thk Fib Pipe Cover w/ Fire Retardant Jackets	65.00	LF	AASBC	0.06 4	1.84 119	0.02 1	1.42 92	0.00 0	3.28 213
2"D Pipe, 1-1/2" Thk Fib Pipe Cover w/ Fire Retardant Jackets	65.00	LF	AASBC	0.06 4	2.04 133	0.02 2	1.60 104	0.00 0	3.66 238
Contract				43	1,355	43	3,881	0	5,279
CB BLDG 028, ECO #5				43	1,355	43	3,881	0	5,279

Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB0285: CB BLDG 028, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 14:24:21

ERROR REPORT

ERROR PAGE 1

No errors detected...

\* \* \* END OF ERROR REPORT \* \* \*

***Building 101***  
***(Typical for 102, 103, 104, 105, 106, 108,***  
***109, 110, 111, 112, 113, and 114)***

***Mechanical Estimate***

**CARLISLE BARRACKS ENERGY STUDY**  
**Individual Building Material Take Off Worksheet**

Building No. 101		Building Name: FORBES AVE.	
Date Prepared: JAN. 21, 1994		Estimator: DICK CONRAD	Sheet of
BID ITEM			
Description		Quantity	Unit Measurement
02113	3001 DEMO, ASB PIPE INSUL.	425	LF
02113	4011 ASB ABAT. NOTIFICATION	1	JOB
02113	4012 ASB DECON. TRUCK/EQUIP	1	JOB
02113	4041 ISOLATE ASB WORK AREA	1562	SF
02113	4051 ASB AIR MONITOR	2	DAYS
02113	4071 INITIAL ASB CLEAN-UP	1562	SF
15185	1002 3/4" PIPE W/ 1" INSULATION	220	LF
	3/4" PIPE W/ 1 1/2" INSULATION	10	LF
15185	1003 1" PIPE W/ 1" INSULATION	280	LF
	1" PIPE W/ 1 1/2" INSULATION	20	LF
	1 1/4" PIPE W/ 1 1/2" INSULATION	15	LF
	2" PIPE W/ 1 1/2" INSULATION	180	LF

Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB1015: CB BLDG 101, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 14:34:00

TITLE PAGE 1

---

CB BLDG 101, ECO #5  
ESOS Carlisle Barracks  
Contract No. DACA65-93-C-0018  
Building 101, Pipe & Duct Insul  
Carlisle Barracks, PA

Designed By: Benatec Associates  
Estimated By: Benatec Associates

Prepared By: Benatec Associates

Date: 01/24/94

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Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB1015: CB BLDG 101, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 14:34:00

SETTINGS PAGE 1

\*\* CONTRACTOR SETTINGS \*\*

-----  
AMOUNT PCT PCT S RISK DIFF SIZE PERIOD INVEST ASSIST SUBCON  
-----

01 Heating Contractor

OVERHEAD	P	5.00								
HOME OFC	P	10.00								
PROFIT	C	8.65		0.052	0.075	0.119	0.052	0.075	0.120	0.118
BOND	P	2.00								

Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB1015: CB BLDG 101, ECO #5 - ESOS Carlisle Barracks  
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TIME 14:34:00

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\* \* \* END TABLE OF CONTENTS \* \* \*

Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB1015: CB BLDG 101, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION  
\*\* PROJECT OWNER SUMMARY - LEVEL 1 \*\*

TIME 14:34:00

SUMMARY PAGE 1

	QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	SIOH	TOTAL COST	UNIT COST
01 Contract	1.00 EA	8,844	0	442	0	9,286	9286.11
CB BLDG 101, ECO #5	1.00 EA	8,844	0	442	0	9,286	9286.11



Mon 24 Jan 1994

U.S. Army Corps of Engineers  
 PROJECT CB1015: CB BLDG 101, ECO #5 - ESOS Carlisle Barracks  
 INTERIM SUBMISSION  
 \*\* PROJECT DIRECT SUMMARY - LEVEL 1 \*\*

TIME 14:34:00

SUMMARY PAGE 2

	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
01 Contract	1.00	EA	76	2,423	66	4,420	0	6,909	6908.96
CB BLDG 101, ECO #5 OVERHEAD	1.00	EA	76	2,423	66	4,420	0	6,909 345	6908.96
SUBTOTAL HOME OFC								7,254 725	
SUBTOTAL PROFIT								7,980 691	
SUBTOTAL BOND								8,671 173	
TOTAL INCL INDIRECTS CONTINGENCY								8,844 442	
TOTAL INCL OWNER COSTS								9,286	

Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB1015: CB BLDG 101, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION  
\*\* CONTRACTOR INDIRECT SUMMARY \*\*

TIME 14:34:00

SUMMARY PAGE 3

	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
HC Heating Contractor	6,909	345	725	691	173	8,844	8843.92

Mon 24 Jan 1994

U.S. Army Corps of Engineers  
 PROJECT CB1015: CB BLDG 101, ECO #5 - ESOS Carlisle Barracks  
 INTERIM SUBMISSION  
 01. Contract

TIME 14:34:00

DETAILED ESTIMATE

DETAIL PAGE 1

	QUANTY	UOM	CREW	ID	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST
Contract										
Demo Asb f/Pipe, < 14" D, Min Thk (36cm)	425.00	LF	ULABB		0.01 6	0.38 160	0.00 1	0.24 104	0.00 0	0.62 265
Asb Abatement Notification Fees	1.00	JOB	N/A		0.00 0	0.00 0	0.00 0	1060.00 1,060	0.00 0	1060.00 1,060
Asb Decon of Trucks & Equipment Mobilization Fees	1.00	JOB	N/A		0.00 0	0.00 0	0.00 0	1590.00 1,590	0.00 0	1590.00 1,590
Isolate Asb Work Area Floors Floor Area x 2 Layers 6 Mil Poly	1562.00	SF	AASBF		0.01 8	0.16 251	0.02 24	0.27 414	0.00 0	0.44 689
Asb Air Monitor, 4 - 6 Hours/Day Bulk Sampling Tech Time Only	2.00	DAY	N/A		0.00 0	0.00 0	0.00 0	212.00 424	0.00 0	212.00 424
Initial Asb Abatement Clean-Up Isolated Work Area	1562.00	SF	AASBE		0.01 16	0.34 529	0.02 24	0.01 17	0.00 0	0.36 569
3/4"D Pipe, 1" Thk Fib Pipe Cover w/Fire Retardant Jackets	220.00	LF	AASBC		0.06 14	2.06 454	0.02 5	0.90 198	0.00 0	2.99 658
1"D Pipe, 1" Thk Fib Pipe Cover w/Fire Retardant Jackets	280.00	LF	AASBC		0.06 18	2.06 578	0.02 7	0.93 261	0.00 0	3.02 846
3/4"D Pipe, 1-1/2" Thk Fib Pipe Cover w/ Fire Retardant Jackets	10.00	LF	AASBC		0.05 1	1.76 18	0.02 0	1.35 13	0.00 0	3.13 31
1"D Pipe, 1-1/2" Thk Fib Pipe Cover w/ Fire Retardant Jackets	20.00	LF	AASBC		0.06 1	1.84 37	0.02 0	1.42 28	0.00 0	3.28 66
1-1/4"D Pipe, 1-1/2" Thk Fib Pipe Cover w/ Fire Retardant Jackets	15.00	LF	AASBC		0.06 1	1.94 29	0.02 0	1.53 23	0.00 0	3.49 52
2"D Pipe, 1-1/2" Thk Fib Pipe Cover w/ Fire Retardant Jackets	180.00	LF	AASBC		0.06 11	2.04 367	0.02 4	1.60 288	0.00 0	3.66 660
Contract					76	2,423	66	4,420	0	6,909
CB BLDG 101, ECO #5					76	2,423	66	4,420	0	6,909

Mon 24 Jan 1994

U.S. Army Corps of Engineers

TIME 14:34:00

PROJECT CB1015: CB BLDG 101, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION

ERROR REPORT

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No errors detected...

\* \* \* END OF ERROR REPORT \* \* \*

*Building 120*

*Mechanical Estimate*

933702

# CARLISLE BARRACKS ENERGY STUDY

## Individual Building Material Take Off Worksheet

Building No. 120

Building Name: Thurpe Physical Fit. Ctr

Date Prepared: 1/24/94

Estimator: D. Burke H

Sheet 1 of 1

BID ITEM	Prevent Air Strad.
----------	--------------------

[illegible]

Tue 01 Feb 1994

U.S. Army Corps of Engineers  
PROJECT CB120A: CB BLDG 120, ECO #A - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 15:35:01

TITLE PAGE 1

---

CB BLDG 120, ECO #A  
ESOS Carlisle Barracks  
Contract No. DACA65-93-C-0018  
Building 120, Prevent Air Strat.  
Carlisle Barracks, PA

Designed By: Benatec Associates  
Estimated By: Benatec Associates

Prepared By: Benatec Associates

Date: 02/01/94

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## \*\* CONTRACTOR SETTINGS \*\*

AMOUNT	PCT	PCT S	RISK	DIFF	SIZE	PERIOD	INVEST	ASSIST	SUBCON
--------	-----	-------	------	------	------	--------	--------	--------	--------

## 01 HEATING CONTRACTOR

OVERHEAD	S	5.00	5.00
HOME OFC	P	10.00	
PROFIT	S	8.66	5.00
BOND	P	2.00	

## 02 ELECTRICAL CONTRACTOR

OVERHEAD	P	5.00							
HOME OFC	P	10.00							
PROFIT	C	8.65	0.052	0.075	0.119	0.052	0.075	0.120	0.118
BOND	P	2.00							



Tue 01 Feb 1994

U.S. Army Corps of Engineers  
PROJECT CB120A: CB BLDG 120, ECO #A - ESOS Carlisle Barracks  
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TIME 15:35:01

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Tue 01 Feb 1994

U.S. Army Corps of Engineers  
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\*\* PROJECT OWNER SUMMARY - LEVEL 1 \*\*

TIME 15:35:01

SUMMARY PAGE 1

	QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	SIOH	TOTAL COST	UNIT COST
1 CONTRACT	1.00 EA	5,021	0	251	0	5,272	5271.56
CB BLDG 120, ECO #A	1.00 EA	5,021	0	251	0	5,272	5271.56

Tue 01 Feb 1994

U.S. Army Corps of Engineers  
 PROJECT CB120A: CB BLDG 120, ECO #A - ESOS Carlisle Barracks  
 INTERIM SUBMISSION  
 \*\* PROJECT DIRECT SUMMARY - LEVEL 1 \*\*

TIME 15:35:01

SUMMARY PAGE 2

	QUANTITY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
1 CONTRACT	1.00 EA	97	3,260	33	629	0	3,922	3921.95
CB BLDG 120, ECO #A OVERHEAD	1.00 EA	97	3,260	33	629	0	3,922 196	3921.95
SUBTOTAL							4,118	
HOME OFC							412	
SUBTOTAL							4,530	
PROFIT							392	
SUBTOTAL							4,922	
BOND							98	
TOTAL INCL INDIRECTS							5,021	
CONTNGENCY							251	
TOTAL INCL OWNER COSTS							5,272	

Tue 01 Feb 1994

U.S. Army Corps of Engineers  
PROJECT CB120A: CB BLDG 120, ECO #A - ESOS Carlisle Barracks  
INTERIM SUBMISSION  
\*\* CONTRACTOR INDIRECT SUMMARY \*\*

TIME 15:35:01

SUMMARY PAGE 3

	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
HC HEATING CONTRACTOR	3,086	154	324	309	77	3,951	3950.73
EC ELECTRICAL CONTRACTOR	836	42	88	84	21	1,070	1069.80

Tue 01 Feb 1994

U.S. Army Corps of Engineers

TIME 15:35:01

PROJECT CB120A: CB BLDG 120, ECO #A - ESOS Carlisle Barracks

DETAILED ESTIMATE

INTERIM SUBMISSION

DETAIL PAGE 1

## 1. CONTRACT

QUANTITY UOM		CREW ID	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST
CONTRACT								
Indus Grde Ceiling Fan, 21015 CFM			20.00	658.88	7.67	105.00	0.00	771.55
Reversible, 120V 60Hz, HD 4-Blade	4.00 EA	MSHMD	80	2,636	31	420	0	3,086
3/4" EMT w/Coupling			0.05	1.93	0.01	0.32	0.00	2.26
Mtd Exposed on Flat Wall, 10' Hgt	185.00 LF	EELEF	10	357	1	59	0	418
#10 AWG Cable-Type THW			8.73	315.49	1.17	62.53	0.00	379.19
600V Cu, Sgl Sol, Pl in Cnd, 12'Hgt	0.56 MLF	EELEF	5	175	1	35	0	210
1 Pole, 240 V, 15-60a Breaker			1.54	60.88	0.20	9.77	0.00	70.84
NEMA 1, Standard AIC, Crk Breakers	1.00 EA	EELEB	2	61	0	10	0	71
SPST, EP, 120V, 20A, Exp			0.79	31.40	0.10	105.40	0.00	136.91
Specialty Devices	1.00 EA	EELEB	1	31	0	105	0	137
CONTRACT			97	3,260	33	629	0	3,922
B BLDG 120, ECO #A			97	3,260	33	629	0	3,922

Tue 01 Feb 1994

U.S. Army Corps of Engineers

TIME 15:35:01

PROJECT CB120A: CB BLDG 120, ECO #A - ESOS Carlisle Barracks  
INTERIM SUBMISSION

ERROR REPORT

ERROR PAGE 1

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No errors detected...

\*\*\* END OF ERROR REPORT \*\*\*

***Building 122***  
***Mechanical Estimate***

933702

# CARLISLE BARRACKS ENERGY STUDY

## Individual Building Material Take Off Worksheet

Building No.	122
--------------	-----

Building Name: Root Hall

Date Prepared: 1/26/94

Estimator: D. Burkett

Sheet / of /

BID ITEM	Heat Recovery
----------	---------------

[illegible]



Fri 28 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB122B: CB BLDG 122, ECO #B - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 08:34:54

TITLE PAGE 1

CB BLDG 122, ECO #B  
ESOS Carlisle Barracks  
Contract No. DACA65-93-C-0018  
Building 122, Heat Recovery  
Carlisle Barracks, PA

Designed By: Benatec Associates  
Estimated By: Benatec Associates

Prepared By:  
Benatec Associates

Date: 01/28/94

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Fri 28 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB122B: CB BLDG 122, ECO #B - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 08:34:54

SETTINGS PAGE 1

\*\* CONTRACTOR SETTINGS \*\*

		AMOUNT	PCT	PCT S	RISK	DIFF	SIZE	PERIOD	INVEST	ASSIST	SUBCON
--	--	--------	-----	-------	------	------	------	--------	--------	--------	--------

01 HEATING CONTRACTOR

OVERHEAD	S	5.00	5.00								
HOME OFC	P	10.00									
PROFIT	S	8.66	5.00								
BOND	P	2.00									

02 ELECTRICAL CONTRACTOR

OVERHEAD	P	5.00									
HOME OFC	P	10.00									
PROFIT	C	8.65	0.052	0.075	0.119	0.052	0.075	0.120	0.118		
BOND	P	2.00									

Fri 28 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB122B: CB BLDG 122, ECO #B - ESOS Carlisle Barracks  
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No Backup Reports...

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Fri 28 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB122B: CB BLDG 122, ECO #B - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 08:34:54

SUMMARY PAGE 1

\*\* PROJECT OWNER SUMMARY - LEVEL 1 \*\*

	QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	SIOH	TOTAL COST	UNIT COST
1 CONTRACT	1.00 EA	121,058	0	6,053	0	127,111	127111.09
CB BLDG 122, ECO #B	1.00 EA	121,058	0	6,053	0	127,111	127111.09

Fri 28 Jan 1994

U.S. Army Corps of Engineers  
 PROJECT CB122B: CB BLDG 122, ECO #B - ESOS Carlisle Barracks  
 INTERIM SUBMISSION  
 \*\* PROJECT DIRECT SUMMARY - LEVEL 1 \*\*

TIME 08:34:54

SUMMARY PAGE 2

	QUANTITY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
1 CONTRACT	1.00 EA	1,648	52,967	651	40,950	0	94,568	94567.58
CB BLDG 122, ECO #B OVERHEAD	1.00 EA	1,648	52,967	651	40,950	0	94,568 4,728	94567.58
SUBTOTAL							99,296	
HOME OFC							9,930	
SUBTOTAL							109,226	
PROFIT							9,459	
SUBTOTAL							118,684	
BOND							2,374	
TOTAL INCL INDIRECTS							121,058	
CONTINGENCY							6,053	
TOTAL INCL OWNER COSTS							127,111	

Fri 28 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB122B: CB BLDG 122, ECO #B - ESOS Carlisle Barracks  
INTERIM SUBMISSION  
\*\* CONTRACTOR INDIRECT SUMMARY \*\*

TIME 08:34:54

SUMMARY PAGE 3

	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
HC HEATING CONTRACTOR	94,568	4,728	9,930	9,459	2,374	121,058	121058.18

Fri 28 Jan 1994

U.S. Army Corps of Engineers  
 PROJECT CB122B: CB BLDG 122, ECO #B - ESOS Carlisle Barracks  
 INTERIM SUBMISSION  
 1. CONTRACT

TIME 08:34:54

DETAILED ESTIMATE

DETAIL PAGE 1

QUANTY UOM CREW ID			MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST
CONTRACT								
Heat Recovery Unit			3.80	123.00	1.75	2100.00	0.00	2224.75
	5.00 EA	MSHMG	19	615	9	10,500	0	11,124
Sht Mtl Duct, Low Press, Field Fab			0.10	3.12	0.04	2.01	0.00	5.17
Galv, Field Assemble & Install	8500.00 LB	MSHMF	835	26,540	342	17,085	0	43,966
1-1/2" Fbgs Duct Liner, Fld Instl			0.13	4.14	0.05	2.43	0.00	6.62
(38mm)Tk Acoustical Insulation	5500.00 SF	AASBC	710	22,780	268	13,365	0	36,414
Balancing Heating & Vent Units			16.94	606.37	6.40	0.00	0.00	612.77
	5.00 EA	MSHMA	85	3,032	32	0	0	3,064
CONTRACT			1,648	52,967	651	40,950	0	94,568
CB BLDG 122, ECO #B			1,648	52,967	651	40,950	0	94,568

Fri 28 Jan 1994

U.S. Army Corps of Engineers

TIME 08:34:54

PROJECT CB122B: CB BLDG 122, ECO #B - ESOS Carlisle Barracks  
INTERIM SUBMISSION

ERROR REPORT

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No errors detected...

\*\*\* END OF ERROR REPORT \*\*\*



*Building 253*  
*Mechanical Estimate*

933702

## CARLISLE BARRACKS ENERGY STUDY

### Individual Building Material Take Off Worksheet

Building No. 253

Building Name: medical Supply

Date Prepared: 1/26/94

Estimator: D. Burkett

Sheet 1 of 1

BID ITEM	Prevent Air strat
----------	-------------------

[illegible]

Tue 01 Feb 1994

U.S. Army Corps of Engineers  
PROJECT CB253A: CB BLDG 253, ECO #A - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 15:27:55

TITLE PAGE 1

---

CB BLDG 253, ECO #A  
ESOS Carlisle Barracks  
Contract No. DACA65-93-C-0018  
Building 253, Prevent Air Strat.  
Carlisle Barracks, PA

Designed By: Benatec Associates  
Estimated By: Benatec Associates

Prepared By: Benatec Associates

Date: 02/01/94

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OVERHEAD	P	5.00							
HOME OFC	P	10.00							
PROFIT	C	8.65	0.052	0.075	0.119	0.052	0.075	0.120	0.118
BOND	P	2.00							

Tue 01 Feb 1994

U.S. Army Corps of Engineers  
PROJECT CB253A: CB BLDG 253, ECO #A - ESOS Carlisle Barracks  
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Tue 01 Feb 1994

U.S. Army Corps of Engineers  
PROJECT CB253A: CB BLDG 253, ECO #A - ESOS Carlisle Barracks  
INTERIM SUBMISSION  
\*\* PROJECT OWNER SUMMARY - LEVEL 1 \*\*

TIME 15:27:55

SUMMARY PAGE 1

	QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	SION	TOTAL COST	UNIT COST
1 CONTRACT	1.00 EA	5,173	0	259	0	5,431	5431.25
CB BLDG 253, ECO #A	1.00 EA	5,173	0	259	0	5,431	5431.25

[illegible]

Tue 01 Feb 1994

U.S. Army Corps of Engineers  
PROJECT CB253A: CB BLDG 253, ECO #A - ESOS Carlisle Barracks  
INTERIM SUBMISSION  
\*\* CONTRACTOR INDIRECT SUMMARY \*\*

TIME 15:27:55

SUMMARY PAGE 3

	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
HC HEATING CONTRACTOR	3,086	154	324	309	77	3,951	3950.73
EC ELECTRICAL CONTRACTOR	955	48	100	95	24	1,222	1221.89



Tue 01 Feb 1994

U.S. Army Corps of Engineers

TIME 15:27:55

PROJECT CB253A: CB BLDG 253, ECO #A - ESOS Carlisle Barracks

DETAILED ESTIMATE

INTERIM SUBMISSION

DETAIL PAGE 1

## 1. CONTRACT

		QUANTITY	UOM	CREW ID	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST
CONTRACT										
Indus Grde Ceiling Fan, 21015 CFM					20.00	658.88	7.67	105.00	0.00	771.55
Reversible, 120V 60Hz, HD 4-Blade					80	2,636	31	420	0	3,086
3/4" EMT w/Coupling					0.05	1.93	0.01	0.32	0.00	2.26
Mtd Exposed on Flat Wall, 10' Hgt					12	425	2	70	0	497
#10 AWG Cable-Type THW					8.73	315.49	1.17	62.53	0.00	379.19
600V Cu, Sgl Sol, Pl in Cnd, 12' Hgt					6	208	1	41	0	250
1 Pole, 240 V, 15-60a Breaker					1.54	60.88	0.20	9.77	0.00	70.84
NEMA 1, Standard AIC, Crk Breakers					2	61	0	10	0	71
SPST, EP, 120V, 20A, Exp					0.79	31.40	0.10	105.40	0.00	136.91
Specialty Devices					1	31	0	105	0	137
CONTRACT					100	3,361	33	647	0	4,041
B BLDG 253, ECO #A					100	3,361	33	647	0	4,041

Tue 01 Feb 1994

U.S. Army Corps of Engineers

TIME 15:27:55

PROJECT CB253A: CB BLDG 253, ECO #A - ESOS Carlisle Barracks  
INTERIM SUBMISSION

ERROR REPORT

ERROR PAGE 1

No errors detected...

\*\*\* END OF ERROR REPORT \*\*\*

## CARLISLE BARRACKS ENERGY STUDY

### Individual Building Material Take Off Worksheet

Building No. 253

Building Name:	Medical Supply
----------------	----------------

Date Prepared: 1/26/94

Estimator: D. Burkett

Sheet , of

BID ITEM	Unit	Quantity	Unit Price	Total Price
Infrared Heaters				

## Infrared Heaters

[illegible]

Tue 01 Feb 1994

U.S. Army Corps of Engineers  
PROJECT CB253C: CB BLDG 253, ECO #C - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 15:55:19

TITLE PAGE 1

CB BLDG 253, ECO #C  
ESOS Carlisle Barracks  
Contract No. DACA65-93-C-0018  
Building 253, Infrared Heaters  
Carlisle Barracks, PA

Designed By: Benatec Associates  
Estimated By: Benatec Associates

Prepared By:  
Benatec Associates

Date: 02/01/94

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PROJECT CB253C: CB BLDG 253, ECO #C - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 15:55:19

SETTINGS PAGE 1

\*\* CONTRACTOR SETTINGS \*\*

-----  
AMOUNT PCT PCT S RISK DIFF SIZE PERIOD INVEST ASSIST SUBCON  
-----

01 HEATING CONTRACTOR

OVERHEAD	S	5.00	5.00							
HOME OFC	P	10.00								
PROFIT	S	8.66	5.00							
BOND	P	2.00								

02 ELECTRICAL CONTRACTOR

OVERHEAD	P	5.00								
HOME OFC	P	10.00								
PROFIT	C	8.65		0.052	0.075	0.119	0.052	0.075	0.120	0.118
BOND	P	2.00								

Tue 01 Feb 1994

U.S. Army Corps of Engineers  
PROJECT CB253C: CB BLDG 253, ECO #C - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 15:55:19

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1. CONTRACT.....	1

No Backup Reports...

\* \* \* END TABLE OF CONTENTS \* \* \*

Tue 01 Feb 1994

U.S. Army Corps of Engineers  
PROJECT CB253C: CB BLDG 253, ECO #C - ESOS Carlisle Barracks  
INTERIM SUBMISSION  
\*\* PROJECT OWNER SUMMARY - LEVEL 1 \*\*

TIME 15:55:19

SUMMARY PAGE 1

	QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	SIOH	TOTAL COST	UNIT COST
1 CONTRACT	1.00 EA	69,730	0	3,487	0	73,217	73216.82
CB BLDG 253, ECO #C	1.00 EA	69,730	0	3,487	0	73,217	73216.82

Tue 01 Feb 1994

U.S. Army Corps of Engineers  
 PROJECT CB253C: CB BLDG 253, ECO #C - ESOS Carlisle Barracks  
 INTERIM SUBMISSION  
 \*\* PROJECT DIRECT SUMMARY - LEVEL 1 \*\*

TIME 15:55:19

SUMMARY PAGE 2

	QUANTITY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
1 CONTRACT	1.00 EA	268	9,610	85	44,776	0	54,472	54471.69
CB BLDG 253, ECO #C OVERHEAD	1.00 EA	268	9,610	85	44,776	0	54,472	54471.69
							2,724	
SUBTOTAL							57,195	
HOME OFC							5,720	
SUBTOTAL							62,915	
PROFIT							5,448	
SUBTOTAL							68,363	
BOND							1,367	
TOTAL INCL INDIRECTS							69,730	
CONTINGENCY							3,487	
TOTAL INCL OWNER COSTS							73,217	



Tue 01 Feb 1994

U.S. Army Corps of Engineers  
PROJECT CB253C: CB BLDG 253, ECO #C - ESOS Carlisle Barracks  
INTERIM SUBMISSION  
\*\* CONTRACTOR INDIRECT SUMMARY \*\*

TIME 15:55:19

SUMMARY PAGE 3

	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
HC HEATING CONTRACTOR	51,339	2,567	5,391	5,135	1,289	65,720	65720.40
EC ELECTRICAL CONTRACTOR	3,133	157	329	313	79	4,010	4009.91

Tue 01 Feb 1994

U.S. Army Corps of Engineers  
 PROJECT CB253C: CB BLDG 253, ECO #C - ESOS Carlisle Barracks  
 INTERIM SUBMISSION  
 1. CONTRACT

TIME 15:55:19

DETAILED ESTIMATE

DETAIL PAGE 1

-----  
 QUANTY UOM CREW ID MANHRS LABOR EQUIPMNT MATERIAL OTHER TOTAL COST  
 -----

## CONTRACT

Ifrared Heaters-Oil Fired			4.38	163.00	1.75	2425.00	0.00	2589.75
18.00 EA MSPFC		79	2,934	32	43,650	0	46,615	
1/2" (12mm) Galv Steel Pipe			0.14	4.74	0.05	0.53	0.00	5.33
ASTM A-53, T&C, Sch 40	750.00 LF MPLUE	105	3,558	39	398	0	3,995	
1/2" Bronze 125# Gate Valve			0.32	12.01	0.12	7.05	0.00	19.18
Threaded,Brazed or Soldered	38.00 EA MPLUA	12	456	5	268	0	729	
3/4" EMT w/Coupling			0.05	1.93	0.01	0.32	0.00	2.26
Mtd Exposed on Flat Wall,10' Hgt	735.00 LF EELEF	39	1,418	5	235	0	1,659	
#10 AWG Cable-Type THW			8.73	315.49	1.17	62.53	0.00	379.19
600V Cu,Sgl Sol,Pl in Cnd,12'Hgt	2.21 MLF EELEF	19	696	3	138	0	836	
1 Pole, 240 V, 15-60a Breaker			1.54	60.88	0.20	9.77	0.00	70.84
NEMA 1,Standard AIC,Crk Breakers	9.00 EA EELEB	14	548	2	88	0	638	

## CONTRACT

-----  
 268 9,610 85 44,776 0 54,472  
 -----

CB BLDG 253, ECO #C

-----  
 268 9,610 85 44,776 0 54,472  
 -----

Tue 01 Feb 1994

U.S. Army Corps of Engineers  
PROJECT CB253C: CB BLDG 253, ECO #C - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 15:55:19

ERROR REPORT

ERROR PAGE 1

No errors detected...

\*\*\* END OF ERROR REPORT \*\*\*

***Building 441***  
***(Typical for 442, 443, 444, and 445)***

***Mechanical Estimate***

**CARLISLE BARRACKS ENERGY STUDY**  
**Individual Building Material Take Off Worksheet**

Building No. <b>441</b>	Building Name: <b>FAITH APARTMENTS</b>
Date Prepared: <b>JAN, 20, 1994</b>	Estimator: <b>DICK CONRAD</b> Sheet   of

**BID ITEM**

Description	Quantity	Unit Measurement
02113 3001 DEMO, ASB PIPE INSULATION	830	LF
02113 4011 ASB ABAT. NOTIFICATION	1	JOB
02113 4012 ASB DECON TRUCK/EQUIP.	1	JOB
02113 4041 ISOLATE ASB WORK AREA	1700	SF
02113 4051 ASB AIR MONITOR	2	DAYS
02113 4071 INITIAL ASB CLEAN-UP	1700	SF
15185 1001 1/2" PIPE W/1" INSULATION	160	LF
15185 1002 3/4" PIPE W/1" INSULATION	220	LF
15185 1003 1" PIPE W/1" INSULATION	230	LF
1" PIPE W/1 1/2" INSULATION	10	LF
1 1/2" PIPE W/1 1/2" INSULATION	170	LF
1 1/2" PIPE W/2 1/2" INSULATION	10	LF
2" PIPE W/1 1/2" INSULATION	20	LF
3" PIPE W/2" INSULATION	10	LF

Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB4415: CB BLDG 441, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 14:45:31

TITLE PAGE 1

CB BLDG 441, ECO #5  
ESOS Carlisle Barracks  
Contract No. DACA65-93-C-0018  
Building 441, Pipe & Duct Insul  
Carlisle Barracks, PA

Designed By: Benatec Associates  
Estimated By: Benatec Associates

Prepared By: Benatec Associates

Date: 01/24/94

M C A C E S G O L D E D I T I O N  
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PROJECT CB4415: CB BLDG 441, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 14:45:31

SETTINGS PAGE 1

\*\*- CONTRACTOR SETTINGS \*\*-

-----  
AMOUNT PCT PCT S RISK DIFF SIZE PERIOD INVEST ASSIST SUBCON  
-----

01 Heating Contractor

OVERHEAD	P	5.00								
HOME OFC	P	10.00								
PROFIT	C	8.65		0.052	0.075	0.119	0.052	0.075	0.120	0.118
BOND	P	2.00								

Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB4415: CB BLDG 441, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION

TIME 14:45:31

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No Backup Reports...

\* \* \* END TABLE OF CONTENTS \* \* \*



Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB4415: CB BLDG 441, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION  
\*\* PROJECT OWNER SUMMARY - LEVEL 1 \*\*

TIME 14:45:31

SUMMARY PAGE 1

	QUANTITY UOM	CONTRACT	ESCALATN	CONTINGN	SIOH	TOTAL COST	UNIT COST
01 Contract	1.00 EA	9,711	0	486	0	10,197	10196.81
CB BLDG 441, ECO #5	1.00 EA	9,711	0	486	0	10,197	10196.81

Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB4415: CB BLDG 441, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION  
\*\* PROJECT DIRECT SUMMARY - LEVEL 1 \*\*

TIME 14:45:31

SUMMARY PAGE 2

	QUANTITY UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
01 Contract	1.00 EA	90	2,864	74	4,649	0	7,587	7586.53
CB BLDG 441, ECO #5 OVERHEAD	1.00 EA	90	2,864	74	4,649	0	7,587 379	7586.53
SUBTOTAL HOME OFC							7,966 797	
SUBTOTAL PROFIT							8,762 758	
SUBTOTAL BOND							9,521 190	
TOTAL INCL INDIRECTS CONTNGENCY							9,711 486	
TOTAL INCL OWNER COSTS							10,197	

Mon 24 Jan 1994

U.S. Army Corps of Engineers  
PROJECT CB4415: CB BLDG 441, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION  
\*\* CONTRACTOR INDIRECT SUMMARY \*\*

TIME 14:45:31

SUMMARY PAGE 3

	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND	TOTAL COST	UNIT COST
HC Heating Contractor	7,587	379	797	758	190	9,711	9711.25

Mon 24 Jan 1994

U.S. Army Corps of Engineers

TIME 14:45:31

PROJECT CB4415: CB BLDG 441, ECO #5 - ESOS Carlisle Barracks

DETAILED ESTIMATE

INTERIM SUBMISSION

DETAIL PAGE 1

01. Contract

		QUANTITY	UOM	CREW ID	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST
Contract										
Demo Asb f/Pipe, < 14" D, Min Thk (36cm)	830.00	LF	ULABB	0.01	0.38	0.00	0.24	0.00	0.62	
				11	313	2	202	0	517	
Asb Abatement Notification Fees	1.00	JOB	N/A	0.00	0.00	0.00	1060.00	0.00	1060.00	
				0	0	0	1,060	0	1,060	
Asb Decon of Trucks & Equipment Mobilization Fees	1.00	JOB	N/A	0.00	0.00	0.00	1590.00	0.00	1590.00	
				0	0	0	1,590	0	1,590	
Isolate Asb Work Area Floors	1700.00	SF	AASBF	0.01	0.16	0.02	0.27	0.00	0.44	
Floor Area x 2 Layers 6 Mil Poly				9	273	26	451	0	750	
Asb Air Monitor, 4 - 6 Hours/Day	2.00	DAY	N/A	0.00	0.00	0.00	212.00	0.00	212.00	
Bulk Sampling Tech Time Only				0	0	0	424	0	424	
Initial Asb Abatement Clean-Up Isolated Work Area	1700.00	SF	AASBE	0.01	0.34	0.02	0.01	0.00	0.36	
				18	576	26	18	0	619	
1/2"D Pipe, 1" Thk Fib Pipe Cover w/Fire Retardant Jackets	160.00	LF	AASBC	0.06	2.06	0.02	0.78	0.00	2.87	
				10	330	4	126	0	460	
3/4"D Pipe, 1" Thk Fib Pipe Cover w/Fire Retardant Jackets	220.00	LF	AASBC	0.06	2.06	0.02	0.90	0.00	2.99	
				14	454	5	198	0	658	
1"D Pipe, 1" Thk Fib Pipe Cover w/Fire Retardant Jackets	230.00	LF	AASBC	0.06	2.06	0.02	0.93	0.00	3.02	
				15	475	6	215	0	695	
1"D Pipe, 1-1/2" Thk Fib Pipe Cover w/ Fire Retardant Jackets	10.00	LF	AASBC	0.06	1.84	0.02	1.42	0.00	3.28	
				1	18	0	14	0	33	
1-1/4"D Pipe, 1-1/2" Thk Fib Pipe Cover w/ Fire Retardant Jackets	170.00	LF	AASBC	0.06	1.94	0.02	1.53	0.00	3.49	
				10	330	4	259	0	593	
2" Pipe, 1-1/2" Thk Fib Pipe Cover w/ Fire Retardant Jackets	20.00	LF	AASBC	0.06	2.04	0.02	1.60	0.00	3.66	
				1	41	0	32	0	73	
3"D Pipe, 2" Thk Fib Pipe Cover w/ Fire Retardant Jackets	10.00	LF	AASBC	0.08	2.42	0.03	2.73	0.00	5.18	
				1	24	0	27	0	52	
1-1/2" Pipe, 2-1/2" Thk Fib Pipe Cover w/ Fire Retardant Jackets	10.00	LF	AASBC	0.09	3.04	0.04	3.25	0.00	6.33	
				1	30	0	33	0	63	
Contract				90	2,864	74	4,649	0	7,587	
BLDG 441, ECO #5				90	2,864	74	4,649	0	7,587	

Mon 24 Jan 1994

U.S. Army Corps of Engineers

TIME 14:45:31

PROJECT CB4415: CB BLDG 441, ECO #5 - ESOS Carlisle Barracks  
INTERIM SUBMISSION

ERROR REPORT

ERROR PAGE 1

No errors detected...

\* \* \* END OF ERROR REPORT \* \* \*

*Site*

*Mechanical Estimate*

933702

